

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-6 (cancelled)

Claim 7 (previously presented): A method for auto-focus control in a digital camera, the digital camera comprising a movable lens, the method comprising:

- determining a presence of artificial illumination in the scene;
- determining a frequency of illumination intensity variations in the scene;
- taking a first exposure with the lens in a first position, the first exposure occurring at a preselected phase of the frequency of illumination intensity variations in the scene;
- moving the lens to a second position;
- taking a second exposure at the preselected phase of the frequency of illumination intensity variations; and
- determining which lens position has a better focus measure.

Claim 8 (previously presented): The method of claim 7, wherein the frequency of the illumination intensity variations is determined by user input.

Claim 9 (previously presented): The method of claim 7, wherein the frequency of the illumination intensity variations is determined by measuring the light from the scene for periodic illumination intensity variations.

Claim 10 (previously presented): The method of claim 9, wherein the periodic illumination intensity are variations in brightness.

Claim 11 (previously presented): The method of claim 9, wherein the light from the scene is focused onto a photo sensor and the periodic variations are variations in contrast.

Claim 12 (previously presented): The method of claim 7, wherein the frequency of the illumination intensity variations is determined by the geographical location of the scene.

Claim 13 (previously presented): A method for auto-focus control in a digital camera, the digital camera comprising a lens, the method comprising:

- predicting at least one frequency, wherein the at least one frequency represents a variation in the illumination of a scene;

- measuring light from the scene at a periodic rate, wherein the periodic rate is different than any of the predicted frequencies or any multiple of the predicted frequencies, using an exposure length that is different than any of the periods of the predicted frequencies during the measuring;

- determining that an artificial illuminant is illuminating the scene when the measured light from the scene changes periodically;

- determining the frequency of the periodic changes using fast Fourier transform analysis of the measured light;

- synchronizing an exposure rate with the frequency of the intensity variations in the scene;

- taking a first synchronized exposure with a lens in a first position, the first synchronized exposure occurring at a preselected phase in the frequency of the periodic changes;

- moving the lens to a second position;

- taking a second exposure at the preselected phase in the frequency of the periodic changes; and

- determining which lens position has a better focus measure.

Claim 14 (original): A method for auto-focus control, comprising:

- predicting a frequency for a variation in the illumination in the scene;
- measuring light from the scene at a periodic rate using a first exposure length that is equal to the period of the predicted frequency;
- re-measuring light from the scene at a periodic rate using a second exposure length that is equal to the period of a second predicted frequency;
- determining the presence and frequency of the variation in the illumination in the scene when the variability of the measurements using the first exposure length is different than the variability of the measurements using the second exposure length;
- synchronizing an exposure rate with the frequency of the intensity variations in the scene;
- taking a first synchronized exposure with the lens in a first position;
- moving the lens to a second position;
- taking a second exposure at the synchronized frequency;
- determining which lens position has a better focus measure.

Claim 15 (cancelled)

Claim 16 (previously presented): A digital camera comprising:

- a photo sensor array, the photo sensor array configured to measure light from a scene at a predetermined exposure length;
- a lens configured to focus the light from the scene onto the photo sensor array;
- a processor, the processor configured to determine the frequency of intensity variations in the illumination of the scene by examining the measured light from the scene for periodic contrast variations, the processor also configured to synchronize at least two exposures, used in auto-focus control, to the intensity variations in the scene.

Claim 17 (previously presented): The digital camera of claim 16, wherein the periodic contrast variations are close to a common AC frequency.

Claims 18-23 (cancelled)